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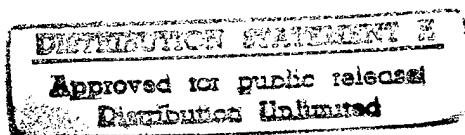
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THE WORK OF THE SCIENTIFIC-TECHNICAL SOCIETY OF  
NON-FERROUS METALLURGY IN 1959 AND THE  
TASK FOR 1960

- USSR -

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## FOREWORD

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THE WORK OF THE SCIENTIFIC-TECHNICAL SOCIETY OF  
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-USSR-

[Following is the translation of an article by G. V. Davydov and V. A. Frclov in Tsvetnyye Metally (Non-Ferrous Metals), No 5, Moscow, 1960, pages 1-4].

The 21st Congress of the Communist Party of the Soviet Union worked out and ratified a grand program for the evolved construction of the communist society and pointed out that the decisive condition for the successful fulfillment of the Seven-Year Plan and the creation of the material-technical base of Communism is the extensive introduction of new technology, integrated mechanization and automation of production processes.

The Scientific-Technical Society of Non-Ferrous Metallurgy has assigned itself the task of insuring the thorough energetic cooperation of industry in the realization of the tasks set for non-ferrous metallurgy by the 21st Party Congress, by the June Plenum of the Central Committee of the CPSU, and by the First Congress of Scientific-Technical Societies of the USSR.

In 1959, the efforts of the members of the Scientific-Technical Society (STS) of Non-Ferrous Metallurgy were directed toward enlarging the production of non-ferrous and rare metals, the development of the ore base of non-ferrous metallurgy, the fullest possible extraction of the useful components from ores, the introduction of new and more productive systems in underground work, the development of open-pit mining, the intensification of metallurgical processes with the employment of natural gas and oxygen, the application of new smelting methods, the expansion of the assortment of economical rolled and tube profiles, and the realization of integrated mechanization and automation of the labor-consuming processes in non-ferrous metallurgy.

To lend practical aid in solving concrete problems relating to the development of the separate branches of the industry, the STS of Non-Ferrous Metallurgy in 1959 held a number of scientific-technical conferences, discussions, seminars, social reviews

and contests aimed at the further development and introduction of new technology, mechanization and automation of production, at the search for more perfect technological processes in mining and in the concentration and working of non-ferrous and rare metals.

The central board of the Society, together with the Central Committee of the Trade Union of Metallurgical-Industry Workers, the State Planning Commissions and the State Scientific-Technical Committees of the USSR and the RSFSR, the institutes, sovnarkhozes and enterprises, held 14 branch scientific-technical conferences, including those on the automation of the processes of mining enterprises (at Degtyarsk); those for an exchange of experience in the introduction of high-production methods in working placer deposits (at Magadan); those on electrothermics in the lead and zinc industry (at Ust'-Kamenogorsk); those on the main directions of development of the electrolysis shops of the aluminum industry (at Stalingrad); those on mechanization, automation and introduction of new technology in the processing of non-ferrous metals (at Artemovsk); those on the phase analysis of the ores of non-ferrous metals, the products of their concentration and metallurgical treatment (at Ordzhonikidze); and others.

A great contribution to the successful fulfillment of the production plans by the non-ferrous metallurgy enterprises in 1959 was made by the nationwide movement of the brigades of communist labor and the action of the collective of the Ust'-Kamenogorsk Lead and Zinc Combine, which in 1959 came out as the initiator of a socialist competition among the non-ferrous metallurgy enterprises.

The collective of this combine kept its word and by 14 December reported to the Central Committee of the CPSU and the Council of Ministers USSR the fulfillment of the yearly plan.

A widely practiced form of development of creative initiative by the members of the Scientific-Technical Society is the holding of contests for the better treatment of individual production problems relating to new designs of machines and mechanisms, more perfect technical processes, etc.

The two contests concluded in 1959 - for a rational and economical consumption of flotation agents at concentrating plants and for introduction of better scientific-research work by young specialists into production - alone yielded a saving of over 32 million rubles.

The contest held jointly with the Central Committee of the Trade Union of Metallurgical-Industry Workers for dust elimination in the crushing and conveying shops and installations of the concentrating and metallurgical plants contributed to a considerable improvement in working conditions in the non-ferrous metallurgy enterprises.

In 1959, the Society, jointly with the Central Committee of the Trade Union of Metallurgical-Industry Workers, organized

four seminars on the change-over to a shortened work day and new wage conditions. Seminars were conducted for the enterprises of Siberia and the Far East (at Chita); for Sverdlovsk, Chelyabinsk, Perm' and Orenburg oblasts (at Revda); for Kazakhstan and Middle Asia (at Ust'-Kamenogorsk); and for Leningradskaya and Murmanskaya oblasts and the Caucasus (at Leningrad). About 300 non-ferrous metallurgy enterprises participated in the seminars.

The participants acquainted themselves with the experience in changing over to the shortened working day and the new pay conditions, with the fundamental changes in the organization of wages, with the economic grounds for the incentive system of wages and the draft of the new labor law code.

The Magadan Board of the STS took an active part in effecting the changeover to the shortened working day in the enterprises of the Magadanskiy Sovnarkhoz through a more rational disposition of workers. This resulted in freeing 8.5% of the total number of auxiliary workers. At the Bor'kiy placer, 11% of the total number of auxiliary workers were freed; at the Frunze placer, 10.5%; at the Gastello placer, 13.5%.

In the mining enterprises of the Magadanskiy Sovnarkhoz, an economy of over 24 million rubles in the wage fund is expected as a result of introducing organizational-technical and economic measures.

At the Chelyabinsk Zinc Plant, the Kamensk-Ural'sk OTSM [?] Plant and the Verkh-Neyvinskiy Secondary Non-Ferrous Metals Plant, the members of the STS introduced more than 250 rationalizing proposals; a considerable part of them were applied in production with a saving of 3,136 million rubles.

[Note: OTSM: Osobennyye tsvetnyye metally - special non-ferrous metals?]

Members of the STS who are workers at the Unipromed' Institute, jointly with the engineering-technical workers of the Mednogorsk Lead and Sulfur Combine, worked out and introduced into the industry the technology of reworking metallurgical dusts, for the purpose of extracting valuable elements from them.

Many problems useful and important for the enterprises were discussed and solved at the conferences and in the discussions held by the primary organizations of the Scientific-Technical Society on subjects pertaining to the development and improvement of the production of their enterprises.

Carrying out the resolution of the Sverdlovsk Scientific-Technical Conference concerning the raising of labor productivity in mining enterprises, the Degtyarsk Copper Mine brought about full mechanization of the hauling of ore and rock to the surface. The Kounrad Copper Mine, by applying the recommendations of the first

branch seminar to drilling and blasting work, attained an annual excavator performance of 169,000 cu m of earth per cu m of shovel capacity and a labor performance of 23 cu m per shift per worker.

A great amount of fruitful work was performed by the STS council of the Moscow Hard Alloys Combine. The STS members of this combine did considerable work in improving production.

The process of hydrogen reduction of tungsten was mastered, which made it possible to increase the productivity of the installations by 2-2.5 times. In one of the shops, the charging and discharging of the wet grinding mills was mechanized; and an enlarged distiller was designed and put into operation, with the result that the output of dried mixtures was increased 15 times.

At the concentrating plant of the Noril'sk Combine, a new scheme of automatic regulation of the crushing processes was introduced at the proposal of STS members.

The STS members of the Noril'sk Combine worked out, tested and installed in the "Medvezhiy Ruchey" mine a rotating percussion drill of a new design, the performance of which reached e m/hr, i.e. 4-6 times greater than with the cable percussion drills used in the mine.

In the enterprises of the Lyakkan ore administration, 77 rationalizing proposals and two technical improvements were provided in the first half-year. Almost all the rationalizers are members of the STS.

The primary STS organization of the Tyzny-Auz Combine during six months of 1959 held 13 conferences, participated in by representatives of the institutes of the Gipronikel', TSNIGRI, Gintsvetmet and Mekhanobr, the North-Caucasian Mining and Metallurgical Institute, and others.

These conferences examined such questions as dust control in underground workings when operating ore chutes of great depth (as much as 600 m.); the installation of highly efficient systems of mining ore with deep boreholes; etc.

The conferences and discussions in 1959 were participated in by 94,426 persons. For the purpose of disseminating the most advanced production experience and the achievements of native and foreign practice, the Society's organizations gave 6,225 papers and lectures on various scientific-technical and productional subject, attended by 130,890 persons, and also published 13 works with a total volume of 100 publisher's signatures and 7,800 copies.

In carrying out all measures, the Central Board relied on the work of its sections - mining, concentrating, metallurgical, the section on economics and labor organization, and others.

Scientific-technical conferences and deliberations pertaining to questions of the development of economic administrative regions were also held in the individual localities by the republic and oblast boards of the STS.

For example, the Ural Board of the STS (chairman A. N. Shilin) discussed questions of the integrated utilization of raw materials, rational schemes of working oxidized nickel ores, ways of increasing the life span of quickly worn-out parts of metallurgical and concentrating equipment, the reduction of the cost of processing ore, and improvement in the technology and increase in extraction of metals on dredges and hydraulic installations.

The Krasnoyarskiy STS Board (chairman V. S. Kabanov) discussed questions pertaining to the discovery and utilization of production reserves in the enterprises of the kray, ways of increasing the extraction of metals at the concentrating plants, ways of raising labor productivity and the introduction of new techniques in non-ferrous metal mines; questions of silicosis control in the enterprises of the Krasnoyarskiy Kray; and measures for promoting economy and thriftiness in the consumption of material values in the enterprises.

The Chita STS Board (chairman F. A. Trifonov) discussed questions pertaining to prospecting and exploration for mineral deposits, the improvement of sanitary and hygienic working conditions in the crushing and conveying shops; experience in modernizing equipment; and experience with high-speed flotation at the concentrating plant of the Sikhote-Alin' Combine.

The Kazakh STS Board (chairman M. A. Sokolov) in 1959 held a series of conferences, seminars and contests which had a positive effect on the operation of the industry.

The results of the work of the Society's organizations and members in 1959 could have been more considerable and successful if a number of serious defects in the work had been eliminated in due time.

The Third Plenum of the Central Board of the STS of Non-Ferrous Metallurgy, held in February in Leningrad, in the course of the discussion of the results of the Society's work in 1959, brought out these defects and outlined measures for removing them in its further work.

The Third Plenum resolved to regard it as a most important and fundamental task of the STS for 1960 to intensify still more the work directed toward the realization of the resolutions of the 21st Congress of the CPSU, the June Plenum of the CC CPSU and the measures worked out on the basis of these resolutions and adopted by the All-Union Congress of the STS, the Third Plenum of the Central Committee of the Trade Union of Metallurgical-Industry Workers, the First Congress and the Second Plenum of the STS of Non-Ferrous Metallurgy.

The work plan for 1960 provides for a considerable increase in the active and creative participation of the Society's members in the fight for technical progress in non-ferrous metallurgy.

In 1960, the STS has planned to hold a number of branch scientific-technical conferences, seminars, contests and other measures, including seminars on the mastery of the techniques of exploiting schemes and devices for the automation of concentrating plants of the non-ferrous metallurgy industry; conferences on the main directions of development of the technology of production of copper and the integrated utilization of ores and copper concentrates (in the Urals); on the technology of the production of lead and zinc, the integrated utilization of ores and concentrates (in Kazakhstan).

An important scientific-technical measure is the impending branch conference on the integrated mechanization and automation of open-pit mining, which is being held in Kemerovo (May); conferences on raising the concentration indices at the concentration plants (in Kazakhstan) and on the planning, building and operation of the tailing houses of the concentrating plants.

The work provided for by the plan of the STS Central Directorate for 1960 is directed toward lending maximum aid to the sov-narkhozes, enterprises and other organizations in the solution of the tasks set by the directive organs in the field of further technical progress in non-ferrous metallurgy.

The task of all the STS organizations and of all the members of the Society is to participate actively and creatively in the fight for technical progress in non-ferrous metallurgy, to fulfill the work plan and to place under unremitting social control all work on the introduction of new techniques and technology, and on the development of mechanization and automation of production processes. The STS should broadly support the initiative of the foremost collectives in the search for production reserves and in the increase of output and the lowering of costs; and should develop by all means the movement of the brigades of communist labor, expand and improve the practical operation of the schools of foremost experience, actively participate in the development of the mass movement of rationalizers and inventors and co-ordinate its work with other scientific-technical societies.

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